

IN THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims

Claims 1-35 (canceled).

Claim 36 (currently amended): A fuel assembly for a pressurized water nuclear reactor, the assembly comprising:

fuel rods, the fuel rods having an outer cladding and an upper and a lower plug and having a length and a diameter; and

a skeleton for supporting the fuel rods, the fuel rods extending in a longitudinal direction and being arranged at nodes of a substantially regular network, the support skeleton comprising an upper terminal end-piece and a lower terminal end-piece, and guide tubes that connect the upper and lower terminal end-pieces, the guide tubes of the support skeleton having openings for receiving rods of an assembly for controlling and stopping the pressurized water nuclear reactor, the fuel rods being arranged longitudinally between the upper and lower terminal end-pieces, wherein the lower terminal end-piece has a top side and a bottom side, the top side facing the fuel rods and the bottom side being opposite the top side and has noses for orientating flow of a coolant fluid of the reactor along lower ends of the fuel rods, the noses being arranged in the nodes of the substantially regular network in order to be positioned in a longitudinal continuation of at least a majority of the fuel rods of the support skeleton,

wherein the noses project from the bottom side of the lower terminal end-piece and converge to be narrower than the diameter of the fuel rods in a direction that is orientated from the top side of the lower terminal end-piece towards the bottom side of the lower terminal end-piece.

Claim 37 (previously presented): The assembly according to claim 36, wherein the lower terminal end-piece comprises an arrangement for laterally maintaining lower ends of the fuel rods, wherein the arrangement is configured in nodes of the substantially regular network.

Claim 38 (withdrawn): The assembly according to claim 37, wherein the arrangement comprises housings that receive the lower ends of the fuel rods.

Claim 39 (previously presented): The assembly according to claim 37, wherein the maintaining arrangement is an arrangement for longitudinally securing the lower ends of the fuel rods relative to the lower terminal end-piece.

Claim 40 (previously presented): The assembly according to claim 39, wherein the lower terminal end-piece comprises two components that clamp between them the lower ends of the fuel rods.

Claim 41 (withdrawn – previously presented): The assembly according to claim 40, wherein the longitudinal securing arrangement comprises projections that are provided on the lower terminal end-piece and rings that are provided at the lower ends of the fuel rods and that are fitted to the projections.

Claim 42 (withdrawn): The assembly according to claim 41, wherein that the rings comprise relief portions for abutment against one of the components.

Claim 43 (withdrawn): The assembly according to claim 38, wherein the lower ends of the fuel rods comprise widened feet that are clamped between the two components.

Claim 44 (withdrawn – previously presented): The assembly according to claim 37, wherein the lower ends of the fuel rods are expansion-rolled on the lower terminal end-piece.

Claim 45 (withdrawn – previously presented): The assembly according to claim 39, wherein the longitudinal securing arrangement comprises screws that abut the lower terminal end-piece and that are engaged in the lower ends of the fuel rods.

Claim 46 (withdrawn): The assembly according to claim 39, wherein the longitudinal securing arrangement secured by snap-fitting.

Claim 47 (previously presented): The assembly according to claim 36 wherein the noses converge to a point.

Claim 48 (canceled).

Claim 49 (new): The assembly according to claim 36, wherein the lower terminal end-piece includes a wall integral with first noses of the noses, the wall having holes for the guide tubes, the terminal end-piece further including screws covering the holes for the guide tubes, heads of the screws defining other noses of the noses other than the first noses.

Claim 50 (new): The assembly according to claim 36, wherein the nodes are in one of a 14x14, 15x15 and 17x17 pattern.

Claim 51 (new): The assembly according to claim 36, further comprising grids of intersecting plates defining cells, the fuel rods arranged in the cells and defining an outer periphery of the fuel assembly between the grids.

Claim 52 (new): The assembly as recited in claim 36, further comprising a central instrumentation tube between the upper and lower terminal end-pieces and having an opening for receiving a probe.

Claim 53 (new): The assembly as recited in claim 36, wherein the nodes are in a 17x17 pattern, the assembly including at least 24 guide tubes.

Claim 54 (new): A fuel assembly for a pressurized water nuclear reactor, the assembly comprising:

fuel rods, the fuel rods having an outer cladding and an upper and a lower plug and having a length and a diameter; and

a skeleton for supporting the fuel rods, the fuel rods extending in a longitudinal direction and being arranged at nodes of a substantially regular network, the support skeleton comprising an upper terminal end-piece and a lower terminal end-piece, and guide tubes that connect the upper and lower terminal end-pieces, the guide tubes of the support skeleton having openings for receiving rods of an assembly for controlling and stopping the pressurized water nuclear reactor, the fuel rods being arranged longitudinally between the upper and lower terminal end-pieces, wherein the lower terminal end-piece has a top side and a bottom side, the top side facing the fuel rods and the bottom side being opposite the top side and has noses for orientating flow of a coolant fluid of the reactor along lower ends of the fuel rods, the noses being arranged in the nodes of the substantially regular network in order to be positioned in a longitudinal continuation of at least a majority of the fuel rods of the support skeleton,

wherein the noses converge to be narrower than the diameter of the fuel rods in a direction that is orientated from the top side of the lower terminal end-piece towards the bottom side of the lower terminal end-piece.

Claim 55 (new): The assembly according to claim 54, wherein the noses converge to a point.

Claim 56 (new): The assembly according to claim 54, wherein the lower terminal end-piece includes a wall integral with first noses of the noses, the wall having holes for the guide tubes, the terminal end-piece further including screws covering the holes for the guide tubes, heads of the screws defining other noses of the noses other than the first noses.

Claim 57 (new): The assembly according to claim 54, wherein the nodes are in one of a 14x14, 15x15 and 17x17 pattern.

Claim 58 (new): The assembly according to claim 54, further comprising grids of intersecting plates defining cells, the fuel rods arranged in the cells and defining an outer periphery of the fuel assembly between the grids.

Claim 59 (new): The assembly as recited in claim 54, further comprising a central instrumentation tube between the upper and lower terminal end-pieces and having an opening for receiving a probe.

Claim 60 (new): The assembly as recited in claim 54, wherein the nodes are in a 17x17 pattern, the assembly including at least 24 guide tubes.